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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,855	04/05/2004	Akihiro Okano	US01-03060	1830

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EXAMINER

QUINN, NEIL P

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/816,855

Applicant(s)

OKANO, AKIHIRO

Examiner

Neil P. Quinn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/5/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 8, 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Weitbruch, et al. (publication #20040165064).

In regards to Claim 1, Weitbruch, et al. teach: *A device for preventing burn-in of a display screen of an image display device, the device comprising:*

a blurring device for applying a blurring process to an input image signal to obtain a blurred image signal; (see Weitbruch, et al. Paragraphs 0023,0024). The resulting "combined picture" from the overlay of the inverted image and the previous image result in image degradation which corresponds to the blurring device as claimed. (see Weitbruch, et al., Fig. 7)

and a contrast inversion device for inverting contrast of a luminance level of the blurred image signal to generate a burn-in prevention image signal. (see Weitbruch, et al. Paragraphs 0079,0081). The "inverted picture" which is drawn on top of the original

image to prevent burning corresponds to the claimed contrast inversion device. (see Weitbruch, et al. Fig. 8)

In regards to claim 8, Weitbruch, et al. teach: . *A method* of preventing burn-in of a display screen of an image display device, the method comprising the steps of:

- subjecting an input image signal to blurring to obtain a blurred image signal; (see Weitbruch, et al. Paragraphs 0023,0024). The resulting "combined picture" from the overlay of the inverted image and the previous image result in image degradation which corresponds to the claimed blurring device.

- subjecting the blurred image signal to contrast inversion to invert contrast of a luminance level of the blurred image signal to generate a burn-in prevention image signal. . (see Weitbruch, et al. Paragraphs 0079,0081). The "inverted picture" which is drawn on top of the original image to prevent burning corresponds to the claimed contrast inversion device.

In regards to claim 15, Weitbruch, et. al teach: A display apparatus comprising:

- a display device having a display screen; (see Weitbruch, et al. Fig. 20 item 10)
- a contour modification circuit for blurring an input image to obtain a blurred image when the input image is a still image; (see Weitbruch et al. Fig. 20 items 12,13,15,16).

The fact that it can process still images is further mentioned: "... a static menu is

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displayed during some minutes and afterwards a "ghost" menu is visible on the next scene as a positive image." (see Weitbruch, et al. Paragraph 0014).

- a contrast inversion circuit for inverting contrast of a luminance level of the blurred image to obtain a contrast inverted image; (see Weitbruch, Fig. 20 items 12,13,15,6; Fig. 8)

- and a driver for displaying the contrast inverted image on the display screen when the input image is a still image. (see Weitbruch, Fig. 20 items 10,11,13,14; Fig. 8)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2-3,5-6, 9,10,12,13,16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weitbruch (Publication #2004/0165064) in view of Criton, et al. (Publication # 2002/0191846).

In regards to claims 2, 9, 16,18, Weitbruch, et al. teaches: teaches all of the claimed limitations except for:

the limitation: "wherein pixel data of the input image signal is grouped into a plurality of pixel blocks, each pixel block includes N rows.times.M columns of pixels," However, Criton, et al teaches this limitation. (see Criton, et al. Paragraph 0010). The "...image ... is divided into non-overlapping macroblocks" These macroblocks correspond to the plurality of pixel blocks which can consist of any number of rows or pixels.

and "the blurring device is a quantizer that quantizes the pixel data of the input image signal for each pixel block." (see Criton, et al. Paragraph 0038). The quantizer is used to handle the macroblock input, which works to combine foreground and background images.

This quantizer from Criton, et al. would be used in Weitbruch, et al.'s method for compensating burn-in effects on display panels as he wiped the screen (see Weitbruch, et al., Fig. 6).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize the quantizer as taught by Criton, et al. in

Weitbruch, et al.'s device because the quantizer could speed up the image input from the wiping motion.

In regards to claim 3, 6, 10, 13, and 19, Weitbruch et al. and Criton, et al. teach all of the claimed limitations except for:

- varying a size of the pixel block for each field of the input image signal. Criton, et al. however, teach this limitation. (see Criton et al., Paragraph 0030). The "size of a macroblock is $B_h \times B_v$ pixels, where B_h is the horizontal dimension and B_v is the vertical dimension of the macroblock, respectively". These macroblock dimensions correspond to the ability vary the size of the pixel block for each field of the input signal.

In regards to Claims 5, 12, and 17, Weitbruch, et al. and Criton, et al. teach all of the claimed limitations except for:

- the blurring device is a mosaicking circuit that mosaicks the pixel data of the input image signal for each pixel block. However, Criton, et al. teach this limitation. (see Criton, et al. Paragraph 0010). The macroblocks and vectors are used "to align an individual macroblock with a corresponding mosaic sample array". This mosaicking creates a combined image that would result in a blurred image in which Weitbruch, et al.'s device could then apply a contrast inversion method to.

Claims 4, 11, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weitbruch (publication #20040165064) in view of Hamilton (Publication # 2001/0035874).

In regards to Claim 4,11, and 20, Weitbruch, et al. teaches all of the claimed limitations except:

“further comprising a device for applying a position variation process to the burn-in prevention image signal to shift, with an elapse of time, a display position on the display screen of a display object that is displayed on the basis of the input image signal”

Hamilton teaches the above limitations (see Hamilton, Paragraphs 0007,0008). Hamilton’s method of “periodically changing the location of the textual information” in order to “provide a simple method for avoiding CRT monitor phosphor burning” directly corresponds to the claimed “controller for shifting, with an elapse of time, a display position of the burn-in prevention image on the display screen.”

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize the image shifting as taught by Hamilton in Weitbruch, et al.’s system because the image shift technique provides an effective means for preventing phosphor burn-in.

Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weitbruch (publication #20040165064) in view of Criton et al. (Publication # 2002/019846) and in further view of Hamilton (Publication # 2001/0035874).

In regards to Claim 7 and 14, Weitbruch, et al. and Criton, et al. teach: the device according to claim 5. However, they fail to mention all limitations.

Hamilton teaches the limitation: applying a position variation process to the burn-in prevention image signal to shift, with an elapse of time, a display position on the display screen of a display object that is displayed on the basis of the input image signal. (see Hamilton, Paragraphs 0007,0008). Hamilton's method of "periodically changing the location of the textual information" in order to "provide a simple method for avoiding CRT monitor phosphor burning" directly corresponds to the claimed "controller for shifting, with an elapse of time, a display position of the burn-in prevention image on the display screen."

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize the image shifting as taught by Hamilton in Weitbruch, et al.'s and Criton, et al.'s system because the image shift technique provides an effective means for preventing phosphor burn-in.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

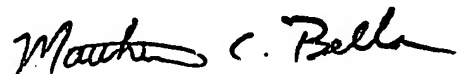
- Patent #4722005 teaches about contrast dimming
- Publication #20010035874 teaches about reducing phosphor burning
- Patent #6313878 teaches about hardware to implement screen saver functions

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil P. Quinn whose telephone number is 571-272-7745. The examiner can normally be reached on Monday through Friday from 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Bella, can be reached at 571-272-7778

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Neil Quinn 7/15/2005



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